

SnowEx Community Meeting
August 20, 2018
100 Participants

Gatebe: Thank you to the community and to NSIDC for all of the work making the data products available. There are 23 datasets being tracked by NSIDC. 9 are available now with full documentation. Use them for science. ASO, UAVSAR, and GLISTEN-A are on different websites.

Jessica: iSWGR updates (see slides)

Mike: SnowEx Science Plan. Support decision making for future SnowEx campaigns. Focus on “gaps” in knowledge of snow remote sensing. 2017 – snow in forests, 2019 – mountain and wet snow; 2020- high-latitude forests and tundra snow; 2021 Prairie or maritime or both. In each, resources should be dedicated to assessing energetics, modeling, and data assimilation. Living google doc – send e-mail to Mike Durand or Mark Raleigh.

Tom: Optical remote sensing has a table in the document about albedo, etc. – much effort has been on snow depth and snow water equivalent, but albedo is alive.

HP: SnowEx 2019, please send feedback on the slides. 2019 has smaller budget than 2017. Small teams distributed across multiple snow climates, using low-risk sensors. Include both accumulation and melt, hence wet snow, mostly mountains; thermal IR for snow surface energetics. Sierra site not technically maritime. Glen Liston and Odelle Reinking modeled snow over potential sites. Focusing on places with experienced field personnel within one day’s drive. CUES site is highest priority site because ASO will fly most times and is closest to UAVSAR’s base at JPL. East River will have spring ASO, and Grand Mesa still has its energy balance sites. Liquid water content has a large effect on L-band, so will want this. Short 1-day campaigns aligned with overflights. Environment Canada in Trail Valley Creek 2019. Finalize flight plans by September, start flights in December. Write to SnowEx19@gmail.com -- send feedback and/or volunteer. Multiple people will check this.

Tom: Eastern Sierra, ASO plane is based out of Mammoth airport, can do tours of the plane.

Jiyue Zhu: U Mass radar, in the near future, adding more bands and more cross-correlation. Open tundra – U Mass radar is good for this. The soil is a mixture of organic layer and vegetation. This affects the signal. Radar backscatter will change with weight.

DK: NASA Goddard will support this.

Chip Miller: Science lead from Above – what we said resonates, they would like to coordinate for 2019-20 winter. He can share the UAVSAR lines. It's in the field as we speak, went over BERMS sites over Saskatoon last week, going out of Fairbanks next month, have thickness, active layer depth. They have glaring gaps in their cold season measurements. Can talk about spatial requirements and revisits. SWE and the recent occurrence of rain in the Arctic (only happening for last 4-5 years) – ice on snow is new to that part of the world, very important for the ecosystem.

Anne: Her PhD student is working on rain-on snow occurrence for the whole domain. Modify the passive microwave algorithm to get those events.

Chip: Important for all the mammals.

Anne: Appreciates the community of wildlife ecologists and Laura Prugh and Natalie Bowman.

Jessica: We invite everyone to a town hall at AGU. Also, congrats to Ludo Brucker (AGU Cryo young investigator); Dorothy Hall (AGU Fellow)